



State Registration Number

A8640

Michigan Department of Environmental Quality  
Air Quality Division

## **RENEWABLE OPERATING PERMIT STAFF REPORT**

ROP Number

MI-ROP-A8640-201X

SEVERSTAL DEARBORN, LLC

SRN: A8640

Located at

4001 Miller Road, Dearborn, Michigan 48120

Permit Number: MI-ROP-A8640-201X

Staff Report Date: June 6, 2011

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) requires that the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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Air Quality Division**RENEWABLE OPERATING PERMIT**

ROP Number

MI-ROP-A8640-201X

**JUNE 6, 2011 STAFF REPORT****Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with a ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan's Administrative Rules for air pollution control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft permit terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft permit pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

**General Information**

|   |  |
|---|--|
| Stationary Source Mailing Address:                          | 14661 Rotunda Drive<br>P.O. Box 1699<br>Dearborn, Michigan 48120-1699  |
| Source Registration Number (SRN):                           | A8640  |
| North American Industry Classification System (NAICS) Code: | 331111   |
| Number of Stationary Source Sections:                       | 2  |
| Is Application for a Renewal or Initial Issuance?           | Renewal  |
| Application Number:   | 200900065  |
| Responsible Official:                                       | 1. Section No. 1 – Severstal Dearborn, LLC<br>Mr. Bruce L. Black, Vice President and General Manager<br>4001 Miller Road, Dearborn, MI 48120<br>Phone Number: 313-317-8955<br><br>2. Section No. 2 – Edw. C. Levy Co.<br>Mr. Thomas A. Smith, General Operations Manager<br>13800 Mellon Street, Detroit, MI 48217<br>Phone Number: 313-429-2600 |
| AQD Contact:  | Katherine R. Koster, Environmental Engineer<br>313-456-4678  |
| Date Permit Application Received:                           | April 14, 2009   |
| Date Application Was Administratively Complete:             | April 17, 2009   |
| Is Application Shield In Effect?                            | Yes  |
| Date Public Comment Begins:                                 | June 6, 2011   |
| Deadline for Public Comment:                                | July 6, 2011   |

## **Source Description**

Severstal Dearborn, LLC (Severstal) operates an integrated steel mill at the Rouge Industrial Complex in Dearborn, Michigan. The Rouge Industrial Complex is located at 3001 and 4001 Miller Road in Dearborn, Michigan (Wayne County). The complex is bounded by Rotunda Drive on the north, Miller Road on the east, Dix Avenue and Rouge River on the south, and Schaefer Road on the west. Severstal operations occupy approximately 500 acres on the southern half of the complex and include, but are not limited to, two blast furnaces with C Blast Furnace operating and B Blast Furnace undergoing repairs to date, a basic oxygen furnace shop, two continuous casters, a hot strip mill, and cold mill operations. The plant produces sheet steel that is used in a variety of manufacturing applications. Ford Motor Company operates the remainder of the complex. The area is mainly industrial, and the nearest residence is approximately 1500 ft east of Miller Road. Severstal is independent of the Ford Motor Company and is an autonomous producer of steel.

Edw. C. Levy Co., Plant 6 operates a slag processing operation on Severstal property under a separate Title V permit. The process plant extracts metals and other materials from the slag which are either returned to the Severstal plant for reuse or sold to external markets. The slag is crushed and screened to produce different sizes of finished product. Edw. C. Levy Co., Plant 6 by virtue of its operation, is located on the Rouge property, and is entirely dependent on Severstal slags for its raw material. It is also a support facility of the Severstal primary activity as it was installed primarily to process Severstal slags.

The blast furnace slag pit and the runway slag watering station are also Levy processes but those are included in Severstal's Title V permit as Section 2 as agreed between the two companies.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2010** submittal.

### **TOTAL STATIONARY SOURCE EMISSIONS**

| <b>Pollutant</b>                                     | <b>Tons per Year</b> |
|--|----------------------|
| Carbon Monoxide (CO)                                 | 16,260               |
| Lead (Pb)  | 0.09                 |
| Nitrogen Oxides (NO <sub>x</sub> )                   | 611                  |
| Particulate Matter (PM)                              | 319                  |
| Sulfur Dioxide (SO <sub>2</sub> )                    | 651                  |
| Volatile Organic Compounds (VOCs)                    | 40                   |
| <b>Individual Hazardous Air Pollutants (HAPs) **</b> |                      |
| HCL  | 19                   |

\*\*As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the draft ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

## **Regulatory Analysis**

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Wayne County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants except for Annual and 24 hour PM<sub>2.5</sub> standard.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because:

- The potential to emit carbon monoxide, nitrogen oxide, sulfur dioxide, volatile organic compounds, and particulate matter exceeds 100 tons per year.
- The potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is more than 10 tons per year and/or the potential to emit of all HAPs combined is more than 25 tons per year.
- The source is subject to 40 CFR Part 63, Subpart FFFFF – National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel manufacturing Facilities.

The stationary source was subject to review under the Prevention of Significant Deterioration regulations of CFR 40, PART 52.21, because at the time of New Source Review permitting the potential to emit of each criteria pollutant was greater than 100 tons per year.

There have been changes to Severstal operations and equipment since issuance of the initial ROP. These changes include issuance of air use Permit to Install (PTI) No. 182-05 for the installation of a modified C Blast Furnace and Casthouse, new Baghouse for air pollution control of the C Blast Furnace, new Baghouse for secondary air pollution control of the BOF Shop, and for miscellaneous modifications to the C Blast Furnace stove, BOF Shop, Desulfurization Process, and equipment for handling, processing, and storage of coal for blast furnace operation. However, as of June 6, 2011, equipment for pulverizing coal on site, as allowed under PTI 182-05B has not been installed. All emission units in the stationary source have undergone an appropriate evaluation for toxic emissions as required under Rule 225 during the permit 182-05 review. The permit to install has undergone two modifications thereafter and is now permit to install No. 182-05B. The waste oxides reclamation facility, EGWASTEOXREC, has been removed from the ROP renewal because the equipment has been dismantled.

Severstal also received an air use Permit to Install No. 8-08 for a new pickle line, tandem cold mill, and hot dip galvanizing line, but the construction of the equipment has not yet been completed at the time of this ROP renewal application.

WCAQMD Consent Orders 0030-97 and 0041-97 have been terminated and are no longer required to be referenced as an applicable requirement in the ROP renewal application. Where these Consent Orders were the only referenced applicable requirement in a condition, the condition has been removed in the ROP renewal. However, some conditions from the terminated Consent Orders were agreed upon with the company to remain and have additional applicable requirements listed such as Rule 336.1213(3), Rule 336.1901, and/or R336.1910 in the renewal ROP.

EPA Consent Decree Civil Action Nos. 00-75452 and 0075454 have been terminated and are no longer required to be referenced as an applicable requirement in the ROP renewal application. Where these Consent Decrees were the only referenced applicable requirement in a condition, the condition has been removed in the ROP renewal. However, some of the removed conditions require the facility to retain the required records for three years after termination of the Decree.

MDEQ AQD Consent Order No. 6-2006 was issued March 21, 2006 and is still in effect. The requirements contained in this Consent Order have been incorporated into the ROP renewal. The company submitted a request on April 15, 2011 to terminate the order. However, the order remains in effect until the request is granted by AQD. Consent Order SIP No. 30-1993 revised September 9, 1994, and Consent Order No. 9-2010 are still valid and the requirements have been retained.

Consent Order SIP 18-1993, Revised September 9, 1994 is still in effect and the requirements in this Consent Order are retained in Section 2 of the ROP.

The stationary source is subject to the Maximum Achievable Control Technology Standards for Integrated Iron and Steel Manufacturing Facilities promulgated in 40 CFR, Part 63, Subpart FFFFF – National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities which took effect in May 22, 2006.

The facility's acid pickling line and hydrochloric acid storage tanks (EUPICKLINSCRUBS and EUHCLSTORAGESTRU) at the stationary source are subject to the Maximum Achievable Control Technology Standards for Steel Pickling promulgated in 40 CFR, Part 63, Subpart CCC which took effect in June 22, 2001.

EUSCREENHOUSEEMGEN, EUCBFTUYERECOOLINGEMGEN, EUCBFHEARTHSTAVECOOLING EMGEN, EUCBFBOSHSTOVECOOLINGEMGEN, EUWSACEMGEN, EUCBFDRILLEMGEN, and EUCBFSCRWTREMGEN, at the stationary source are subject to the Maximum Achievable Control Technology Standards for Reciprocating Internal Combustion Engines promulgated in 40 CFR, Part 63, Subparts A and ZZZZ. EUFIREPUMP and EUSCREENHOUSEY2K were installed in 1999 and are not subject to 40 CFR Part 63 Subpart ZZZZ.

EUSCREENHOUSEEEMGEN at the stationary source is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines promulgated in 40 CFR, Part 60, Subparts A and IIII.

Requirements contained in 40 CFR Part 60, Subpart Na have not been added to the applicable requirements for the Desulfurization process (EUDESULF) because the new desulfurization skimming process has not yet been installed.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the MDNRE "Procedure for Evaluating Periodic Monitoring Submittals."

None of the installed emission units at the stationary source are subject to the federal Compliance Assurance Monitoring (CAM) regulation under 40 CFR, Part 64, because the emission limits and/or standards are addressed by the Iron and Steel MACT (40 CFR Part 63, Subpart FFFFF) and the HCL Pickling MACT (40 CFR Part 63 Subpart CCC) which were proposed after November 15, 1990 as required to meet the exemption in 40 CFR Part 64.2(b)(1)(i).

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

### **Source-wide Permit to Install (PTI)**

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. 199700004 are identified in Appendix 6 of the ROP.

| PTI Numbers                          |                 |                |        |
|--------------------------------------|-----------------|----------------|--------|
| C-5062                               | C-6532, C-6709  | C-7924, C-8400 | 193-00 |
| 142-97                               | C-11578, C11579 | 343-97         | 463-97 |
| C-11710, and C-11713<br>thru C-11724 |                 |                |        |

### **Equivalent Requirements**

This permit does not include any equivalent requirements pursuant to Rule 212(5). Equivalent requirements are enforceable applicable requirements that are equivalent to the applicable requirements contained in the original PTI, a Consent Order/Judgment, and/or the State Implementation Plan.

### **Non-applicable Requirements**

Part E of the draft ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the draft ROP pursuant to Rule 213(6)(a)(ii).

### **Processes in Application Not Identified in Draft ROP**

The following table lists processes that were included in the ROP application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

| <b>Exempt Emission Unit ID</b> | <b>Description of Exempt Emission Unit</b>               | <b>ROP Exemption</b> | <b>PTI Permit Exemption</b> |
|--------------------------------|--|----------------------|-----------------------------|
| EUCOLDCLEANERS                 | Parts washers  | R336.1212(4)(a)      | R336.1281(h)                |
| EUMAINTPAINTSP                 | Maintenance paint spray booth                            | R336.1212(4)(g)      | R336.1290                   |
| EUBOFLIMERECEIVI               | Basic Oxygen furnace lime unloading station and baghouse | R336.1212(4)(g)      | R336.1290                   |
| EUCOKEUNLOADEE                 | Coke unloading EE Building                               | R336.1212(4)(g)      | R336.1290                   |

### **Draft ROP Terms/Conditions Not Agreed to by Applicant**

This permit does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

### **Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements at the time of issuance of the ROP except for requirements listed in Appendix 2 of the draft ROP. The table in Appendix 2 of Section 1 (1-2) and Section 2 (2-2) contains a Schedule of Compliance developed pursuant to Rule 119(a)(i). The applicant must adhere to this schedule and provide the required certified progress reports at least semiannually or in accordance with the schedule in the table. A Schedule of Compliance for any applicable requirement that the source is not in compliance with at the time of permit issuance is supplemental to, and shall not sanction non-compliance with, the applicable requirements on which it is based.

### **Action taken by the MDEQ**

The AQD proposes to approve this permit. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the U.S. Environmental Protection Agency (USEPA) is allowed up to 45 days to review the draft permit and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Lynn Fiedler, Assistant Division Chief. The final determination for ROP approval/disapproval will be based on the contents of

the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.



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**RENEWABLE OPERATING PERMIT**

ROP Number

**MI-ROP-A8640-201X**

**MARCH 2, 2012 STAFF REPORT  
ADDENDUM**

**Purpose**

A Staff Report dated June 6, 2011, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

|                       |  |
|-----------------------|--|
| Responsible Official: | 1. Section No. 1 – Severstal Dearborn, LLC<br>Mr. Bruce L. Black, Vice President and General Manager<br>4001 Miller Road, Dearborn, MI 48120<br>Phone Number: 313-317-8955<br><br>2. Section No. 2 – Edw. C. Levy Co.<br>Mr. Thomas A. Smith, General Operations Manager<br>13800 Mellon Street, Detroit, MI 48217<br>Phone Number: 313-429-2600 |
| AQD Contact:          | Katie Koster, Environmental Engineer<br>313-456-4678   |

**Summary of Pertinent Comments**

The Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD) received the following comments from Severstal Dearborn LLC and the general public during public hearing conducted on July 12, 2011, and during the public comment period from June 6, 2011 to July 6, 2011:

**Comment 1:**

The environmental justice plan for DEQ highlights “meaningful involvement” from the community as an important element. The draft ROP and associated documents for the Severstal ROP renewal are lengthy and technically complex. Commenter requested funding to hire a technical advisor to comment on behalf of the community. Also, commenter requested additional community information meetings much further in advance of hearing so individuals can prepare comments more thoroughly.

**AQD Response 1:**

AQD staff is available throughout the public comment period to answer questions and provide information to concerned citizens. Staff contact information is provided in the ROP documents.

Furthermore, there is no regulatory requirement or funding available for AQD to hire a technical advisor for the community.

Comment 2:

MDEQ should review the components of the December 2010 fallout mitigation plan submitted by Severstal with the community as fallout is a major concern for the community.

AQD Response 2:

Components of this plan were presented and discussed during the ROP informational meeting held on July 12, 2011 from 6:00 – 7:00 p.m. The plan is part of the Schedule of Compliance in the ROP Appendix 1-2 and 2-2.

Comment 3:

The fugitive dust control plan is inadequate as it does not contain provisions for preventing collectate in the debris pile from becoming a fugitive dust issue and does not require dust contained in roll off boxes to be covered to prevent fugitive dust.

AQD Response 3:

AQD agrees that the fugitive dust plan should be more explicit in addressing these items. Facility has updated their fugitive dust plan. The fugitive dust plan is a separate document from the ROP. Facility updated fugitive dust plan to clarify that the rolloff boxes are enclosed. Facility responded via email on 8/9/2011 that the debris pile is “added to and shipped from on almost a daily basis so it would not be practical to treat with dust suppression.” However, facility added a statement that “adequate steps to prevent collectate from air pollution control equipment from becoming fugitive dust will be taken such as mixing with water at the pile or adding water when necessary.”

Comment 4:

General Condition No. 25 references Rule 912. There is a concern that the reporting requirement under Rule 912, which allows up to 2 business days to report certain start up, shut down, malfunctions, and abnormal conditions poses a potential health risk to the community and that there should be immediate reporting to DEQ. Commenter understands that the rule may need to be changed instead of the permit but believes there should be a reconsideration of the rule.

AQD Response 4:

AQD has no legal basis for changing regulations through the ROP renewal process. Additionally, if a situation arose that would present a health risk to the community, AQD would not be the appropriate agency to provide this notification to the public.

Comment 5:

On pg 41, EUCBFCASTHOUSE, Section VI. Monitoring/Recordkeeping, the permit is unclear on whether the facility is required to operate a COMS or bag leak detection system. A request for clarification as to which type of monitoring is required was made.

AQD Response 5:

Per the federal regulations (the Integrated Iron and Steel Manufacturing MACT, 40 CFR Part 63 Subpart FFFFF), permittee has the option of operating under either scenario. As such, applicable conditions for

each scenario were included in the permit. In the event that the facility decides to change method of compliance, the ROP does not have to be reopened as the applicable requirements for both scenarios are already present. Currently, the facility is operating EUCBFCASTHOUSE with a bag leak detection system.

Comment 6:

Requested an overview presentation be given before the ROP public hearing to explain major changes, corrective measure to address fallout, and monitoring and reporting.

AQD Response 6:

This information was provided in the informational session held on July 12, 2011 from 6:00 – 7:00 p.m. before the public hearing

Comment 7:

Commenter is concerned that emissions from Severstal have potential to cause respiratory problems. The staff report makes no reference that Severstal test data found increased emissions and based on those results Severstal requested increased levels. Commenter requested that the results of recent test data be examined in conjunction with the ROP and that the cumulative emissions levels from the various components be examined collectively in order to gauge an accurate idea of the impact of the emissions.

AQD Response 7:

The ROP process is not the appropriate forum for establishing/revising emission limits. Appendix 1-2 of the draft ROP renewal references the emission limits that the company exceeded during stack testing. As such, the facility was issued several violation notices and referred to AQD Enforcement Unit. A schedule of compliance is in the ROP, as required by the regulations (Rule 336.1213(4)(b)), when a facility is not in compliance with all the terms and conditions of the ROP at the time of issuance. Company submitted a permit to install application, 182-05C, to revise emission limits which is currently being evaluated, along with the testing data, by AQD Permit Staff. This evaluation will include analysis of emissions limits in conjunction with health based screening levels. Any potential changes in allowed emission limits would occur in the PTI 182-05C, not this ROP renewal.

Per state regulations, emissions are not evaluated cumulatively but on an emission unit basis.

Comment 8:

Commenter is concerned that the ROP includes several items, including the Hydrogen Sulfide (H<sub>2</sub>S) Monitoring Protocol, that allow Severstal to be “self policing”. Commenter is requesting assurance that measures are in place to monitor, test, and maintain records to ensure compliance with existing limits. Residents in the area are experiencing health effects from high levels of H<sub>2</sub>S.

AQD Response 8:

The purpose of an ROP is to ensure that adequate testing, monitoring, and recordkeeping provisions to demonstrate compliance with applicable limits are in the permit. At this time, AQD believes the draft renewal contains adequate measures. Additionally, while the H<sub>2</sub>S Monitoring Protocol will be implemented by Severstal and Levy, both companies are required to document and maintain records of their investigations. The companies must certify under penalty of law that these records are true, accurate, and complete. In the event of an alleged H<sub>2</sub>S odor complaint, AQD would also conduct an independent investigation.

Comment 9:

Commenter mentioned two outstanding consent orders and a May 2010 violation notice for fallout. Commenter believes the draft ROP renewal does not account for the May 2010 violation and requested that total emissions from this facility are taken into consideration before the ROP is granted.

AQD Response 9:

The ROP process is a vehicle for ensuring that all applicable requirements (ARs), as defined in R 336.1101(o), are appropriately applied to an air pollution source in a single document and that compliance with these requirements is assured [40 CFR §70.6(a), MCLS §324.5506(6), R 336.1213(2)]. Applicable requirements include conditions contained in active consent orders, such as 6-2006, 9-2010, 30-1993, and 18-1993. No new or revised emission limits can be imposed in this process. In cases where the facility is in non-compliance at the time of ROP issuance, a schedule of compliance, with required progress reports, is included in the ROP. In this case, facility is allegedly in violation of Rule 901 for fallout (which includes the May 2010 violation notice) and a schedule of compliance is in Appendix 1-2 and 2-2. Additionally, outstanding violations, including the May 2010 violation notice, have been escalated to the AQD Enforcement Unit and will be resolved through a consent order.

Comment 10:

State needs to seriously consider performing a cumulative impacts analysis for the area due to the high number of air quality permits being issued.

AQD Response 10:

The review process being sought by the commenter is not within the scope of the ROP process. The ROP process is a vehicle for ensuring that all applicable requirements (ARs), as defined in R 336.1101(o), are appropriately applied to an air pollution source in a single document and that compliance with these requirements is assured [40 CFR §70.6(a), MCLS §324.5506(6), R 336.1213(2)]. R 336.1213 lists the content that the AQD may include in an ROP which encompasses all applicable requirements and the necessary monitoring, recordkeeping, reporting, and other conditions to determine the status of compliance of the stationary source. Additionally, current air toxics regulations do not require a cumulative impact review for a Permit to Install. As stated earlier, the facility emission limits and other applicable requirements (such as control technology requirements) are established based on certain criteria and parameters utilizing the most current State and Federal regulations at the time of the application process and as evaluated through New Source Review (NSR).

Comment 11:

Concern about large red, orange, and black releases lasting from 1 to 10 minutes with zero transparency observed quite often from the Basic Oxygen Furnace and other stacks. Several dates in April 2011 were given as an example. Is Method 9 testing being done, are Method 9 protocols being followed, and do the monitors show visual emissions and does the recordkeeping show how often releases happen? Facility should not be able to police themselves and should have strict recordkeeping and more stack testing requirements.

AQD Response 11:

The ROP requires the facility to conduct Method 9/9C readings (a.k.a. visible emission readings) for many of the processes on site and to maintain records of all of the readings and make them readily available for AQD review. Method 9 requires that the reader obtain certification every 6 months to ensure the proper protocol is being followed.

There are no emission measurement monitors for sources of fugitive emissions, i.e. emissions not released from a stack, such as fugitive dust, emissions from roof monitors, and other building openings. Stack testing is impractical for fugitive emissions as they are intermittent and unplanned. As such, compliance is demonstrated through visible emission readings. The draft ROP renewal has increased the frequency of the visible emissions readings required at the Basic Oxygen Furnace (BOF) to address concerns of on going visible emissions incidents. Additionally, when an opacity violation is observed, the facility is required to initiate corrective actions. The draft ROP renewal now has additional recordkeeping requirements that the facility document the cause and corrective actions taken when an opacity violation is observed.

To address the commenter's concerns regarding visible emissions from BOF stacks, weekly Method 9 visible emissions readings during one complete heat, which includes oxygen blowing, have been added for the Electrostatic Precipitator stack (ESP). Additionally, a requirement to develop and implement a malfunction abatement plan (MAP) under Rule 911 for the ESP was also added.

Severstal is required by AQD Consent Order 6-2006 to operate and maintain numerous cameras positioned outside and inside of the BOF. Also, per the consent order and ROP, operators in the BOF are required to initiate corrective actions as soon as possible and maintain a log of the cause and corrective action taken when they observe excess visible emissions on the cameras. To address concerns about visible emissions from the BOF, these requirements have been maintained in the draft ROP renewal and a citation of R 336.1213 ("Rule 213") has been added so that they will exist beyond termination of the Consent Order.

The secondary baghouse stack and desulfurization baghouse stack at the BOF building are required, under the federal regulation (40 CFR Part 63, Subpart FFFFF), to be equipped with bag leak detection devices which are programmed to detect increases in particulate in the exhaust air exiting the baghouse. If visible emissions are a problem, it will be detected with this technology as particulate matter creates visible emissions.

#### Comment 12:

There is a pattern of equipment problems. Are there adequate monitors and records of incidents of equipment malfunctions that cause emissions such as furnace slips, bleeder openings, and damper malfunctions?

#### AQD Response 12:

Per state and federal regulations, facilities are required to operate under a start up, shut down, and malfunction abatement plan to minimize emissions during these instances which includes recordkeeping and reporting requirements. Regarding the bleeder stacks on the blast furnaces, while there are no monitors required, this draft ROP renewal includes a new requirement that the company maintain a log of all openings.

Facilities are also required to report certain malfunctions under the criteria outlined in R 336.1912 ("Rule 912"). However, not all malfunctions meet the criteria of Rule 912. AQD does not have the authority to revise the rules through the ROP process.

#### Comment 13:

Commenter referred to an incident on February 21, 2011 that the facility did not report to AQD and believes this incident demonstrates a problem with reporting.

#### AQD Response 13:

The February 21 incident was a visible emission incident involving beaching iron. To address the commenter's concerns, the draft ROP includes a new requirement that the facility perform visible emission readings during beaching when possible and maintain a log of all beaching events, including the duration and reason.

#### Comment 14:

Commenter believes stack testing once every 5 year is crazy and that evidence exists that testing should be conducted more frequently.

#### AQD Response 14:

A single stack test over a five-year period is the standard stack test required for ROP sources. Under General Condition 13, AQD can require more frequent stack testing if AQD deems it necessary. Also the Iron and Steel MACT Standard requires testing twice per permit term, or once every two and half years for certain emission units. In the interim, the company is required to continuously operate a Continuous Opacity Monitor on the ESP stack, Continuous Emission Monitor on the stove stack, and bag leak detection systems on multiple stacks which continuously monitor the exhaust to detect changes in particulate levels in an exhaust stack. Stack testing is impractical for fugitive emission sources as previously stated in Response 11. As such, these emissions are monitored visually on a routine basis (Method 9/9C readings) and records are required to be maintained. To address citizen concerns, the draft ROP renewal has increased the frequency of visible emission monitoring at emission points that have potential for visible emissions.

#### Comment 15:

Forty plus fallout samples taken from February 20, 2010 to July 1, 2011 by MDEQ and Global Community Monitor indicate the presence of metals which point to steel making operations. Some samples taken and analyzed by G. C. Monitors show a substantial amount of lead well above guidelines set by HUD for exterior surfaces. This indicates an on going problem. Are these incidents considered to be fugitive dust?

#### AQD Response 15:

Fallout from industrial facilities can be caused by multiple reasons, including fugitive dust. AQD has not been provided with G.C. Monitor results that allegedly show high levels of lead. Fallout is regulated under AQD R 336.1901 ("Rule 901"). Rule 901 does not specify emission limits for any criteria pollutants, nor any other regulated pollutants. Rule 901 states, in part, that "a person shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants...injurious effects to human health or safety...or unreasonable interference with the comfortable enjoyment of life and property." AQD has attributed some of the AQD samples results to Severstal/Levy operations and deemed the companies to be in violation of Rule 901. The violations have been escalated to AQD Enforcement Unit and Severstal will be obtaining a consent order to address these violations. In the meantime, the facilities have submitted a schedule of compliance to address the fallout which is included in Appendix 1-2 and 2-2.

#### Comment 16:

Commenter requesting stronger laws and stiffer violations and that Severstal should be responsible for the costs of testing fallout samples.

AQD Response 16:

AQD has no regulatory authority to require the company to pay for testing. The ROP process is not the appropriate forum for addressing/changing laws, regulations, and/or enforcement penalties.

Comment 17:

Commenter requested that if the proposed fallout mitigation plan/schedule of compliance is inadequate, AQD require the company to correct the problem.

AQD Response 17:

As previously mentioned, in addition to the schedule of compliance, Severstal has been escalated to AQD Enforcement Unit and will be entering into a Consent Order to resolve the fallout violations. If the proposed fallout mitigation plan is inadequate after implementation, the facility will be required to implement additional corrective measures and be may be subject to additional fines and penalties through the enforcement process.

Comment 18:

On page 5 of the staff report, commenter questioned the significance of pulverizing coal on site and the difference in equipment being allowed versus being required?

AQD Response 18:

On site pulverizing of coal is a business/operational decision made by the facility and is not required by AQD regulations. However, if the facility wants to be “allowed” to pulverize coal on site, instead of purchasing it from a vendor, a permit to install is needed. The company obtained PTI 182-05B which includes an allowance to install and operate equipment to pulverize coal on site. The significance of not pulverizing on site at this time is that the associated emissions which were accounted for in the Permit to Install are not being generated.

Comment 19:

Commenter questioned PTI 8-08 and the meaning of installation and reporting for equipment not yet installed. How significant is it to have or not to have installed, or constructed, or operationalized this equipment? What is the impact on air quality, if any? In terms of reporting to MDEQ, the permitting body, why has it not taken place?

AQD Response 19:

Since the company has already obtained a permit for the equipment covered under PTI 8-08, the air quality impacts have already been evaluated and accounted for through the permit process. Since the operations have not commenced, no reporting is yet required.

Comment 20:

Commenter expressed concerns over fallout and odors and questioned whether AQD staff has sampled inside residents homes and wants to know the impact of fallout on the residents.

#### AQD Response 20:

As AQD has the authority to regulate outdoor/ambient air, AQD typically does not sample inside of a residence. However, numerous outdoor fallout samples have been collected. AQD attributed some of these samples to Severstal/Levy operations. The companies were issued violation notices and now have a pending enforcement action as well as Schedule of Compliance which is included in Appendix 1-2 and 2-2 of the ROP renewal. At this time, there are no outstanding odor violations.

#### Comment 21:

Commenter referred to a February 21 incident where facility excuses were managerial and supervision. The greater concern is what is Edw. Levy's responsibility is getting the slag properly disposed? Is it Levy's or Severstal's responsibility to monitor the pile up of too much slag? Whose responsibility was it to report this occurrence to MDEQ – Severstal or Levy's?

#### AQD Response 21:

As described in a previous response, the February 21 incident involved visible emissions associated with beaching. To address the commenter's concerns, the draft ROP includes a requirement for the facility to take visible emissions readings during beaching and maintain a log of all beaching events, regardless of if readings were taken, reason, etc.

Companies are required to report certain incidents to AQD within a 2 day timeframe under R 336.1912 but this incident did not meet the criteria for required reporting.

#### Comment 22:

Commenter referred to a March 15, 2011 violation notice for improper operation of the Electrostatic Precipitator (ESP) Continuous Opacity Monitoring System (COMS). In reviewing the company's explanation in steps taken to determine where/what was the cause in the difference in the monitor readings and personnel readings, it would appear that the monitoring system and/or the evaluation of data are not what would be expected to be best industry practice. Requesting a more reliable monitoring system should be priority for MDEQ and the company.

#### AQD Response 22:

Facility adequately addressed the issue with the COMS in their response to the violation notice and it does not appear to be ongoing. In the ROP, the facility is required to report the operational status of the COMS on a quarterly basis and perform an annual audit to verify proper operations. When properly operated, COMS systems have been demonstrated to be very reliable.

#### Comment 23:

Commenter has concerns about current emission limits and how there were set. Commenter questions how Severstal can state in the May 2009 technology evaluation that they are already using baghouses at both blast furnaces and desulf which is the most efficient control for filterable PM and metal emissions when the company failed some emission limit testing.

#### AQD Response 23:

Particulate emissions from operations at Severstal include both a filterable and condensable portion, including the blast furnace and desulfurization operations referenced in the comment. While baghouses are generally highly efficient for controlling filterable emissions above a certain size, the efficiency is significantly lower for condensable particulate. Based on the recent stack testing results, in general, the



company did not meet the emission limits due to the significant condensable portion of the particulate emissions. Many of the emission limits, including specific metals and filterable and condensable particulate are currently under review as part of the Permit to Install 182-05C application that was submitted by the facility to address exceedances of some limits. If the company cannot meet the required emission limits allowed under state and federal law (for both filterable and condensable particulate), additional control measures and/or operational restrictions will be required in the revised permit.

### **Comments received from Severstal Dearborn LLC**

#### **Comment 24:**

Emission Limit Tables — Monitoring/Testing Column. A number of entries in the Monitoring/Testing Method column in Section I for various tables reference operating and monitoring requirements such as visible emission observation requirements or baghouse pressure drop requirements. This presents the potential implication that non-compliance with the referenced requirement (i.e. visible emission requirements or pressure drop requirements) is determinative that there is an exceedance of the emissions limits in Table I for which such monitoring and/or operating requirements are referenced, such as for particulate matter grain loading limits. This is a false implication. For example, baghouse pressure drop could be lower than normal at times when there is little or no flow through the baghouse, and thus in circumstances where there is no particulate matter emission limit exceedance. Similarly, a failure to conduct a visible emissions reading, or an observance of excess opacity, does not represent an exceedance of a grain loading standard. We understand that the Section I cross-references to such monitoring and operating requirements to help serve as a basis on which to demonstrate compliance. Based on the understanding that any non-compliance with such referenced monitoring or operating requirement will not be deemed non-compliance with the referencing Section I emission limit, we are willing to accept the cross-references in the draft ROP.

#### **AQD Response 24:**

As previously discussed with the facility, the conditions cross referenced in the Monitoring/Test Method column of the Emission Limit Table, are those conditions that are necessary to provide a reasonable assurance of continuous compliance with the associated emission limits outside of stack testing. This is also the position of EPA as baghouse pressure drop monitoring is the method for demonstrating continuous compliance with the associated emission limits in the Iron and Steel MACT per 63.7833(c).

However, AQD understand that there are certain situations, such as the examples given in the above comment, that would not necessarily constitute violations of the associated emission limit.

#### **Comment 25:**

“Test Protocol” is listed in many of the Time Period/Operating Scenario columns in Section I for numerous emission units. Unlike our existing ROP, no test methods are specified. In the future, when testing protocols and methodologies are identified for the various emissions testing required under the ROP, it is critical that the testing protocol ultimately used be consistent with methodologies used in deriving the underlying permit limit. Any other approach would be inappropriate. For example, any requirement that would measure compliance with a particulate matter emission limit derived as a filterable limit by measuring both filterable and condensable emissions would constitute an unauthorized and inappropriate revision and reduction in the relevant emissions limit. It is our understanding that MDEQ is not intending the use of the “Test Protocol” references to be a mechanism to revise underlying permit limits.

#### AQD Response 25:

The ROP renewal process cannot be used to revise underlying emission limits and therefore AQD does not intend, nor have the authority, to use “Test Protocol” as a mechanism to revise permit limits. AQD agrees that the test protocol used to show compliance with a limit should be consistent with the methodology used to derive the limit. AQD permit staff generally does not specify the test methods for pollutants in the permit conditions to allow flexibility to use the most appropriate methods at the time each test is conducted. Test methods to be used must be approved by the AQD prior to the test being conducted as specified in each permit condition that requires emission testing. As such, test protocol was listed in PTI 182-05B and was incorporated into the ROP renewal.

#### Comment 26:

Time Period/Operating Scenario: A provision is included in multiple emission unit tables where compliance with a limit is to be based on a 12-month rolling average. Specifically, in such instances the permit states that compliance is “as determined at the end of each calendar month”. This will confirm our understanding from our discussion with you that this language is a stipulation regarding how to perform the mathematical calculations to determine compliance, but is not a requirement that such calculation must actually be conducted on the last day of each month. Instead, compliance calculations are to be conducted on a timely basis consistent with the recordkeeping and reporting provisions of the ROP.

#### AQD Response 26:

As previously discussed with the facility, AQD agrees that compliance calculations are to be conducted on a timely basis consistent with the recordkeeping and reporting provisions of the ROP.

#### Comment 27:

Design Parameter Issue — Prior to the issuance of the draft ROP for public comment, Severstal submitted a number of comment letters that addressed the question of the design parameters listed in the permit, and the fact that prior drafts of the ROP inappropriately listed design parameters for pollution control equipment, such as design air temperature and design air flow, in a manner that could be misinterpreted as imposing limits based on such design parameters and/or making such design parameters enforceable requirements. After discussing this issue with Bernie Sia of the AQD, later versions of the draft ROP addressed this issue by moving these parameter listings from their original placement in Section VIII (Stack/Vent Restrictions) to Section IV (Design/Equipment Parameters). The proposed draft ROP, however, notates the design/equipment parameter listings with a footnote 2, indicating such are state only enforceable. However, this notation incorrectly implies that the design parameters are limitations or requirements that are enforceable. We understand that the MDEQ’s response on this issue is that the design parameters are set forth in an underlying PTI and therefore must be repeated in the ROP. We disagree, in that the design parameters are merely descriptive of the source, and not operating requirements or restrictions in and of themselves. As such, they are not underlying applicable requirements. For example, please see how design parameters were treated in our original (and current) ROP and in PTI 182-05B. However, we are willing to accept the recitation of design parameters in the renewal of the ROP under the express understanding that they merely descriptive of the listed sources, and are not enforceable operating requirements.

#### AQD Response 27:

As previously discussed with the facility, design parameters and associated underlying applicable requirements (UARs) are present in PTI 182-05B in the stack/vent parameters tables. As such, these conditions are required to be included in the ROP as the permit should include all applicable requirements. Furthermore, conditions originating from a permit to install subsequently require a

footnote per federal and state regulations (Rule 336.1214a(3)). The facility must submit a permit to install application to request removal of these conditions.

Comment 28:

Pressure Drop Requirements: For a number of baghouse controlled sources, the ROP requires both compliance with the manufacturer's instructions for the baghouse and compliance with a specified pressure drop range. These are duplicative and potentially inconsistent requirements. Additionally, given the applicable MACT requirements for monitoring of baghouse operating conditions, establishing a fixed pressure drop for such baghouses is inappropriate and inconsistent with the flexibility granted by the MACT standard. It is our understanding that these overlapping but potentially inconsistent requirements for the baghouse operation are not intended to present a situation where compliance with both elements at the same time is impossible, nor should they be interpreted as such.

AQD Response 28:

As previously discussed with the company, AQD and EPA consider pressure drop to be an indicator of baghouse performance and a basis for compliance with emission limits outside of routine stack testing. Federal regulations, specifically the Iron and Steel MACT (40 CFR Part 63 Subpart FFFF), require pressure drop to be maintained within the "normal range identified in the manual" and monitored daily. Pressure drop ranges in the draft ROP renewal were provided by the facility and should be reflective of this "normal range" and should not present an inconsistent situation.

Per state regulations, Rule 910 requires an air-cleaning device be installed, maintained, and operated in a satisfactory manner and in accordance with these rules and existing law. AQD considers maintaining pressure drop within a certain range to be demonstrative of properly functioning baghouse.

Comment 29:

Bag Leak Detection Alarm Corrective Actions: Several tables have identical recordkeeping requirements for corrective action in response to bag leak detection system alarms, based on 40 CFR 63.7842(d) and 40 CFR 63.7833(c)(1). However, this requirement is listed in different sections from table to table. Specifically, it is listed in Section VI for EULADLEREFINE1 and EULADLEREFINE2, while it is in Section V for EUBBFCASTHOUSE, EUCBFCASTHOUSE, EUREDADLINGBOF, EUDESULFURIZATN and FGBOFSHOP. We suggest that the requirement should be listed consistently in each section, and would suggest that inclusion in Section VI "Monitoring/Recordkeeping" rather than Section V "Testing/Sampling" would be more logical.

AQD Response 29:

AQD agrees that it should be consistent and will include the requirement in VI. Monitoring/Recordkeeping for EUBBFCASTHOUSE, EUCBFCASTHOUSE, EUREDADLINGBOF, EUDESULFURIZATN and FGBOFSHOP.

Comment 30:

The Table of Contents (TOC) is missing listings for: EUPICKLINGSCRUBS (page 85), EUANNEALFURNACES (page 89), FGBOFSHOP (page 99), FGSREHEATFURN123 (page 104), and Appendix 1-9 Fugitive Dust Control Plan (page 123)

AQD Response 30:

AQD agrees and will update the TOC.

### Comment 31:

Source-Wide Conditions: In Sections VI.3 and IX.4 of Section 1 of the ROP, and Sections VI.3 and IX.3 of Section 2 of the Permit, the Source-Wide Conditions tables of the ROP impose conditions based on a portion of Rule 406, regarding hydrogen sulfide. However, Rule 406 is specific to refineries, as Rule 406(1) specifically regulates “refinery process gas streams”. Severstal does not operate a refinery, and therefore Rule 406 does not apply. This conclusion is consistent with the conclusion apparently made by MDEQ upon issuance of the initial ROP for Severstal’s facility. Rule 406 is based on a Wayne County ordinance that was SW approved and was part of the state SIP in 2004 when the initial ROP was issued. Since the ROP was required to include all applicable requirements, the decision not to include the SIP approved hydrogen sulfide requirements from the predecessor ordinance was equivalent to a finding that the facility was not subject to these requirements. There is no basis to change that conclusion now. Accordingly, Rule 406 should not now be included in the ROP. Additionally, Rule 406(2) is vague and ambiguous, poses difficult issues with respect to compliance, compliance certification and enforcement, and is duplicative of other applicable requirements. In particular, Rule 406(2) is severely lacking in specificity as to its implementation, making it both effectively unenforceable and problematic from the standpoint of certifying compliance. Rule 406(2) also fails to identify an appropriate test methodology to evaluate compliance. As such, it is effectively unenforceable, in contravention of Rule 205 (R336.1205), which prohibits the MDEQ from imposing emission limits in permits unless the emission limits are “enforceable as a practical matter.” Rule 406(2) is effectively void for vagueness. It does not provide fair or adequate notice as to its requirements or allow a regulated facility to determine what conduct or circumstances are prohibited. As such, it violates due process. In the spirit of cooperation with the MDEQ, Severstal has agreed to implement a Hydrogen Sulfide Monitoring Protocol. However, Severstal does not waive any arguments as to the inapplicability and unenforceability of Rule 406(2).

### AQD Response 31:

AQD does not agree with commenter. Rule 406(2) reads: “(2) When the odor of hydrogen sulfide is found to exist beyond the property line of a source, a person in Wayne county shall not cause or allow the concentration of hydrogen sulfide to exceed 0.005 parts per million by volume for a maximum period of 2 minutes.” The rule does not confine the regulation to a particular type of source.

Additionally, Rule 406 was incorporated into the State Implementation Plan (SIP) in 2008 as indicated in Part 4 of the Air Pollution Control Rules, not 2004 as incorrectly stated by the commenter. As such, this occurred after issuance of the initial ROP in 2004. Furthermore, no documentation was provided by the facility to demonstrate that AQD expressly determined Severstal was not subject to this regulation.

While AQD recognizes that the facility has numerous concerns about the wording of the regulations, the ROP renewal process is not the appropriate forum to change regulatory language. The purpose of ROP is to include all applicable requirements for a facility in one document which includes Rule 406(2) in this case.

### Comment 32:

#### EUBOF

- a. In Section VI.23 (page 66), the cross-reference in the second sentence should be to VI.22, not VI.23.
- b. In Section VI.29 (page 66), the reference to beaching should be clarified by adding the word “iron”, so that the permit reads “beaching iron.”
- c. In Section VII.6, which is a reporting requirement based on MDEQ Consent Order 6-2006, It should be clarified that the exceedance reporting applies only to exceedances at the BOF Roof Monitor only. We suggest that this requirement read: “The permittee shall

prepare a report for each exceedance at the BOF Roof Monitor of the opacity limit in Section 1.4 in which it shall. . .

AQD Response 32:

AQD agrees and will make the changes.

**Comments received from Edw. C. Levy Co.**

No comments received.

**Changes to the June 6, 2011 Draft ROP**

During the AQD review, the following changes were made:

On page 1, decision maker changed to Lynn Fiedler, AQD Assistant Division Chief

On page 5, added a reference to Levy SIP CO 18-1993

On pg. 58, EUDESULFWATERING, revised emission limit in Section I.3 from a 20%, 6 minute average to a 3 minute average from the BOF roof monitor. BOF roof monitor emissions are limited by state (Rule 336.1364(2)) and federal regulations (40 CFR Part 63 Subpart FFFFF) to 3 minute average. There is no basis for a less stringent 6 minute average. This appears to have been an error.

On pg 62, EUBOF, conditions 9 and 10 were removed as Consent Order 6-2006 modification was approved by AQD.

Changes based on comments:

Updated Table of Contents to include EUPICKLINGSCRUBS (page 85), EUANNEALFURNACES (page 89), FGBOFSHOP (page 99), FGSREHEATFURN123 (page 104), and Appendix 1-9 Fugitive Dust Control Plan (page 123)

For all EU's with the identical recordkeeping requirements for corrective action in response to bag leak detection system alarms, based on 40 CFR 63 .7842(d) and 40 CFR 63.7833(c)(1), this requirement has been placed in Section VI. Monitoring/Recordkeeping for consistency.

For EUBOF, VI.23, changed the cross-reference to VI.22, not VI.23.

For EUBOF, VI.29, added the word "iron" after beaching

For EUBOF, VII.6, clarified that the condition requires a report when there is a BOF Roof Monitor exceedance

For EUBOF, added Condition EUBOF, VI.30, requiring visible emission readings of the ESP stack:  
"30. The permittee shall perform a Method 9 certified visible emission observation of the ESP stack at least once a week during operation for a minimum of one complete heat. The permittee shall initiate corrective action upon observation of visible emissions in excess of the applicable visible emission limitation and shall keep a written record of each required observation and corrective action taken.  
**(R 336.1301, R 336.1213(3))"**

For EUBOF, expanded condition III.6 which now reads: The permittee shall develop and implement a written startup, shutdown and malfunction (SSM) plan for the BOF vessels and the associated emission control system. This plan shall also include the malfunction abatement plan (MAP) information specified

in Rule 911(2), for operation of the ESP. An updated SSM/MAP shall be submitted to the AQD District Supervisor for review and approval within 60 days of ROP issuance. **(R 336.1910, R 336.1911, 40 CFR 63.7810(c), 40 CFR 63.7835(b) and 40 CFR 63.6(e)(3))**